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The construction of algorithms to present grammatical rules is advocated on the basis of clarity and ease of memorization. Algorithmic procedure is demonstrated for the introduction of subordinate clauses by conjunctions in German, and the formation of plural nouns in English. (AF)

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Educational Institutions and Professional and Industrial Organisations are invited to send details of conferences, courses, seminars that may be of interest to our readers.

The Audio-Visual Language Association was founded in 1962 with the aim of fostering the study and promotion of language teaching by means of audio-visual and audio-lingual methods and the use of language laboratory and other teaching aids. It is concerned with all aspects of applied linguistics and language teaching technology.

Algorithms and the Teaching of Grammar

by K. Ffoulkes Edwards

Open any grammar textbook at random and you will probably find a grammatical rule which

1. Contains too many abstract nouns.
2. Contains negations and parentheses.
3. Contains too great a memory load.

The arrival of communication science warns us that abstract nouns make it difficult to form an internal image of a procedure, that too many negations obscure the meaning, that only so many bits per unit of time have a chance to enter the short term memory and even fewer the long term memory.

Cybernetic instruments are able to solve complex problems if we carefully separate the conditions under which certain operations are carried out from the operations themselves.

Programmed Learning insists that we split a difficult piece of information into its basic units and present one unit at a time.

Can we apply any of the above principles to the teaching of grammar? Teaching by algorithm appears to the writer the method incorporating most of them.

Soviet language teachers have tried to present grammar problems in this new way using a dichotomous mode of presentation. The pioneer is Prof. L. N. Landa who has written a book about *Algorithmisation and the Learning Process.*

To illustrate my point, I have taken a chapter from Buckley's *"Living German"* and reknitted it in algorithmic fashion. The lesson has not been tested on students and is simply offered for comments. It deals with subordinate clauses after: *als, bevor, bis, da, dass, damit etc.*

Sie hat bemerkt, dass Paulas Kammer in Unordnung war

Main Clause — Subordinate Clause

Nachdem Anton ausgegangen ist, ist das Haus ruhig

Subordinate Clause — Main Clause

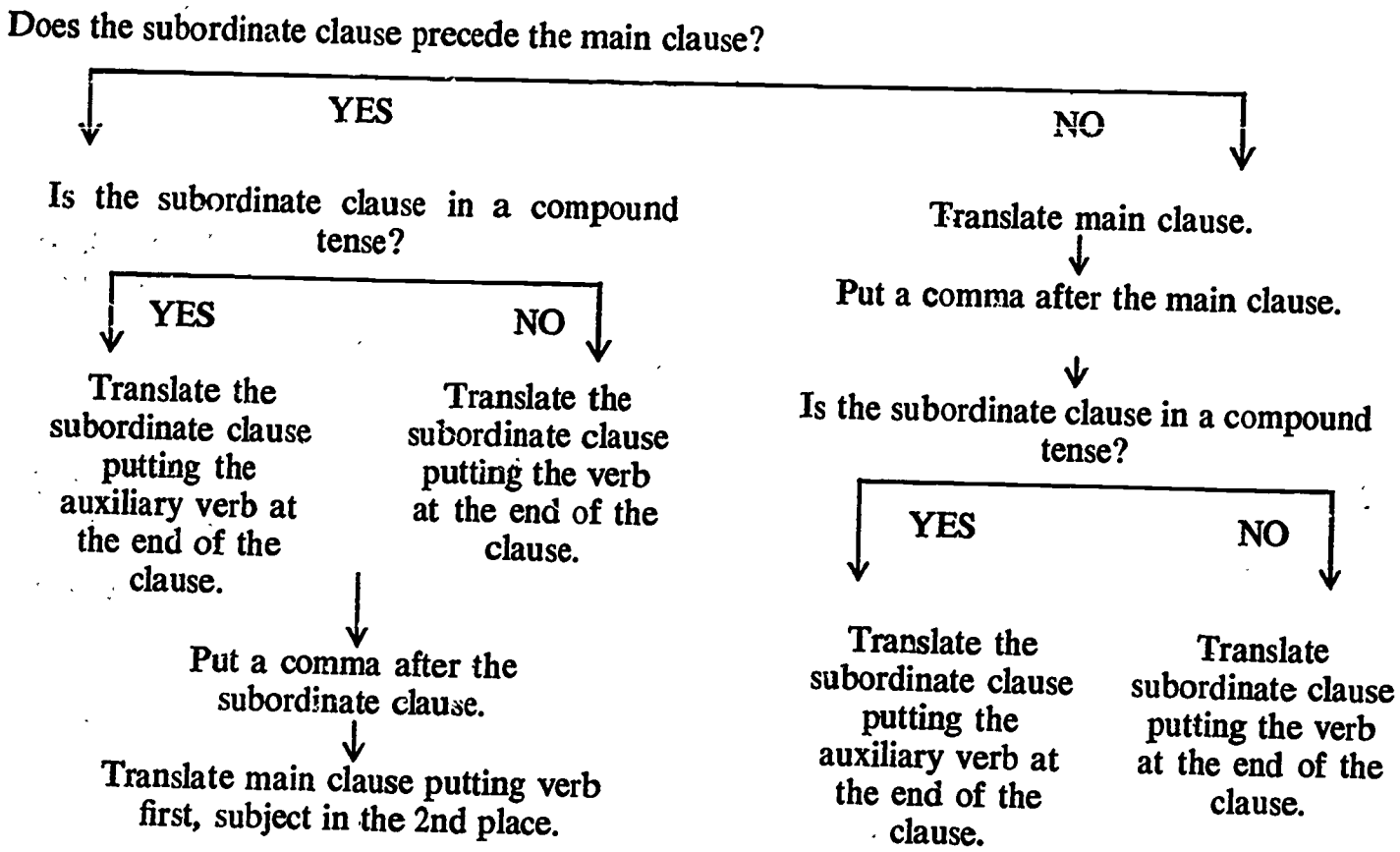
Als, bevor, bis, da, dass, damit, indem, nachdem, ob, sobald, während, weil, wenn.

The above are conjunctions. They introduce subordinate clauses.

Translate the following sentences using the logical tree:

When she has made the bed, she comes down.
She notices that Paula has not slept well.
When he comes back, he plays the piano.
While she makes the beds, she sings a song.
Before they visit me, they always buy sweets.
You work in this class, so as to learn German.
Because he is my friend, he loves me.

LOGICAL TREE



An algorithm, as you can see, is a recipe for a procedure which will lead to the correct solution of any problem of a given class. This may be said of any rule, of course. The advantage over an ordinary rule, written in conversational discourse, is that the student is led to consider only one operation at a time. Do this, that or the other. At certain points in the process he has to ask himself: Is the condition "x" present for me to carry out operation "y"?

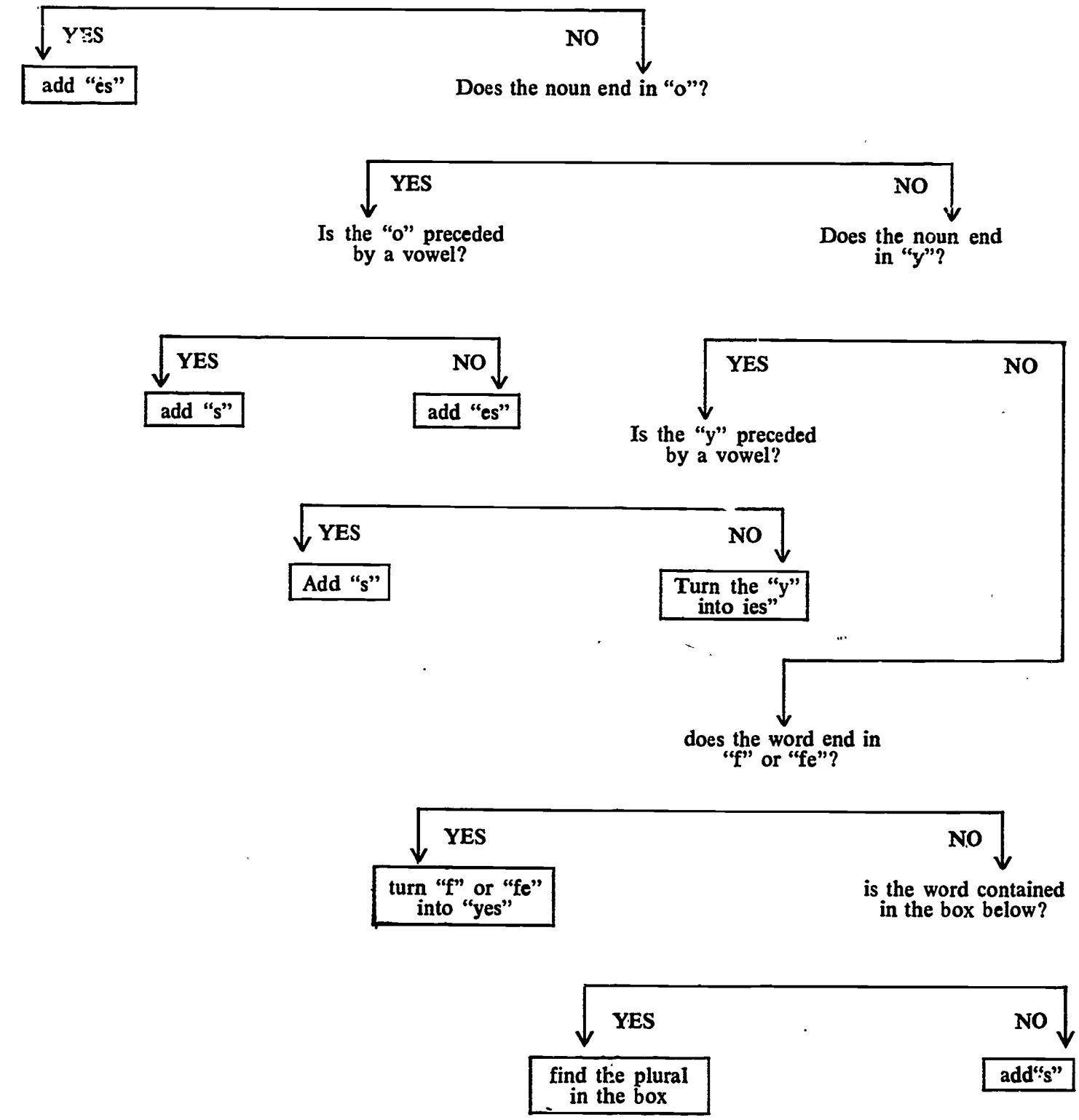
To solve everyday problems by splitting the indeterminacy of a situation in half, is no novelty. We arrange information in this binary manner without giving it the name Algorithm. Viz the following conversation. *"Whom do you think I met in the tube today?" "Male?" "No." "Is she under 25?" "Yes." "Does she live in Chiswick?" "It must be Mary."*

Teaching algorithms can only be constructed where unambiguous rules can be stated. Where a large number of exceptions exist or where two or more forms are equally acceptable, the algorithm becomes more tricky. However, even then the problem can be divided into algorithm plus comments or into a sequence of algorithms.

I have tried to turn the basic rule of how to form the plural in English into an algorithm. This might be called a partial algorithm. It does not deal with foreign words or with compound nouns etc. The intention is to teach the basic rule first, choosing the classes of nouns which fit into this limited area and only when the procedure has become automatic will other subclasses be introduced.

LOGICAL TREE

English Plurals



child	:	children
foot	:	feet
goose	:	geese
louse	:	lice
man	:	men etc.